Review: nicotine replacement therapy as assisted “reduction-to-stop” reduces smoking and sustains abstinence in smokers

**QUESTION**
Is nicotine replacement therapy (NRT) effective and safe when used to reduce smoking with the aim of stopping (assisted reduction-to-stop)?

**REVIEW SCOPE**
Included studies compared NRT using gum or inhaler with placebo, no treatment, non-NRT drugs, or psychological interventions and reported smoking abstinence in smokers who were unwilling or unable to stop smoking abruptly. Adjunct therapies, where used, had to be included in both treatment groups. **Primary outcome** was sustained smoking abstinence for 6 months. Other outcomes were sustained smoking reduction or abstinence from 6 weeks to study end and adverse events (AEs).

**REVIEW METHODS**
Medline, CINAHL, EMBASE/Excerpta Medica, PsycINFO, Cochrane Library, and Science Citation Index (all 1992–Nov 2007); registries of ongoing trials; and reference lists were searched for published or unpublished randomised controlled trials (RCTs). Experts and drug companies sponsoring NRT trials were contacted. 7 RCTs (n = 2767) in analysis, mean age range 42–46 y, 52% women, treatment duration 6–18 mo

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**MAIN RESULTS**
In people unable or unwilling to stop smoking abruptly, meta-analysis showed that NRT-assisted reduction-to-stop smoking resulted in sustained smoking reductions and abstinence (table). Meta-analysis showed that nausea was more frequent in NRT than control groups; groups did not differ for serious AEs (table).

**CONCLUSION**
Nicotine replacement therapy is effective for achieving sustained smoking abstinence in smokers who do not intend or are unable to attempt an abrupt quit.

**ABSTRACTED FROM**

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Clinical impact ratings: GP/FP/Primary care 6/7; IM/Ambulatory care 6/7; Respirology 6/7; Public health 5/7

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**NRT-assisted reduction-to-stop smoking**

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>Number of trials (n)</th>
<th>Weighted event rates</th>
<th>RBI (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking abstinence for 6 months</td>
<td>5 (1833)</td>
<td>6.8% v 3.3%</td>
<td>106% (34 to 215)</td>
<td>29 (15 to 90)</td>
</tr>
<tr>
<td>Smoking abstinence, week 6 to study end</td>
<td>7 (2767)</td>
<td>1.2% v 0.4%</td>
<td>244% (48 to 696)</td>
<td>114 (40 to 570)</td>
</tr>
<tr>
<td>Sustained smoking reduction, week 6 to study end</td>
<td>6 (2233)</td>
<td>6.1% v 1.6%</td>
<td>284% (132 to 535)</td>
<td>23 (12 to 48)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NNT (CI)</th>
<th>RBI (CI)</th>
</tr>
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<tr>
<td>30 (16 to 96)</td>
<td>30 (16 to 96)</td>
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</tbody>
</table>

NRT, nicotine replacement therapy; NS, not significant; other abbreviations defined in glossary. Weighted event rates, RBI, NNT, NNH, and CI calculated from data in article using a fixed-effect model.